

Name: \_\_\_\_\_  
\_\_\_\_\_

Date: \_\_\_\_\_

Algebra 1B Pd: \_\_\_\_\_

## Practice Quiz: Sect 10.1-10.2

### 1. Fill in the table.

QF	Does the parabola open upward or downward?	Is the vertex a minimum or maximum?	Is the QF narrower, wider or the same width as parent QF?	Write the coordinates of vertex.
$y = x^2 + 3$				
$y = -6x^2 - 5$				
$y = -2x^2 + 1$				
$y = 0.3x^2 - 5$				

### 2. Put the functions in order from WIDEST to NARROWEST. Use the capital letters.

A.  $y = 4x^2 + 8$    B.  $y = -1/4x^2 + 9$    C.  $y = x^2 - 11$    D.  $y = -1/8x^2 + 8$    E.  $y = -5x^2 - 1$

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### 3. Create an equation for a quadratic function that has a minimum vertex at (0, -9) and is wider than the parent function. Explain how you know your equation meets these requirements.

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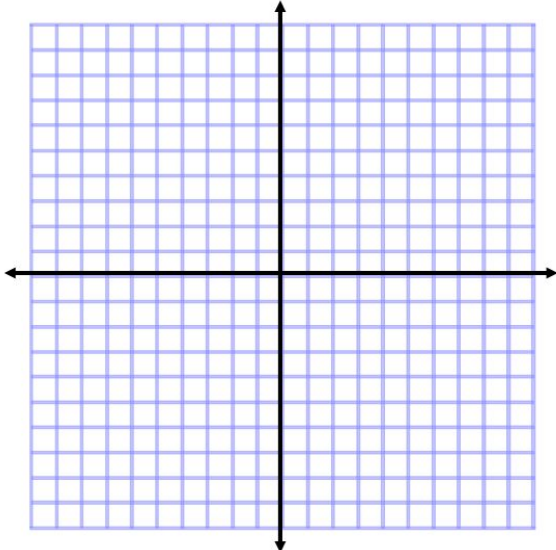
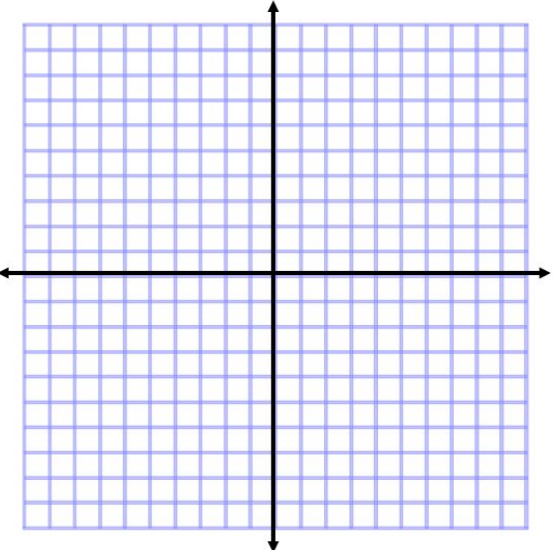
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**4. Find the vertex of each quadratic equation by following the steps provided.**

<p>a. <math>y = 2x^2 + 16x - 1</math></p> <p>1. Find the x-coordinate of the vertex using the formula:  <math>\frac{-b}{2a}</math></p>	<p>b. <math>y = -x^2 - 5x + 3</math></p> <p>1. Find the x-coordinate of the vertex using the formula:  <math>\frac{-b}{2a}</math></p>
<p>2. Substitute your value for x into the equation to find the y-coordinate of the vertex.</p>	<p>2. Substitute your value for x into the equation to find the y-coordinate of the vertex.</p>
<p>3. Write the coordinate of the vertex:          (____, ____)</p>	<p>3. Write the coordinate of the vertex:          (____, ____)</p>

**5. Solve each quadratic equation by SKETCHING the graph of the related quadratic function. You must show your sketch and write your solutions.**

<p>a. <math>x^2 + 5 = 0</math>      solution(s): _____</p> 	<p>b. <math>2x^2 = 0</math>      solution(s): _____</p> 
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